

WETLAND POLICY:
THE NEED FOR CHANGE

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ABSTRACT

In 1986 a New Zealand Wetlands Management Policy was ratified by the New Zealand Government. The need for such a Policy, arose from two factors. Firstly, the extent and quality of wetlands in New Zealand had diminished, and secondly, the great number of agencies involved in the management of wetlands had lead to the fragmented and ineffectual management of wetlands.

This study looks at the ways in which New Zealand's economic and political climate has changed since the 1986 policy was formulated. The changes include; reduced intervention in agriculture, government restructuring, a new Environment Act (1986), and the review of the resource management laws. The 1986 Policy is analysed in the context of these changes.

The study shows that the 1986 New Zealand Wetlands Management Policy has lost much of its usefulness, and needs reviewing to make it applicable and useful in the future.

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CHAPTER ONE

AN INTRODUCTION

In 1986, the then Commission for the Environment, published a booklet entitled 'New Zealand Wetlands Management Policy.

This policy was approved in broad terms, by the Cabinet Policy Committee, with the proviso "that although the protection of representative, important wetlands was desirable, the Government would not allow itself to be bound by the policy".

The process of obtaining a national, government approved wetland policy had been long and involved. In the 1970s, various groups recognised the many different values of wetlands. Because of the poor image that society has of wetlands, public of the poor image that society has of wetlands, public awareness of these values, even within environmental groups, developed very slowly. In the late 1970s greater numbers of reports and articles were published in a number of environmental and scientific journals, about the declining state of our wetland habitats. Various projects requiring the destruction of important wetland sites began to receive greater publicity, such as; plans to drain large parts of the Whangamarino Wetland in the Waikato, for pasture development; the modification of the Rakaia River in south Canterbury for irrigation purposes; and the reclamation of coastal wetlands in the north of the North Island. Slowly, wetlands began to attract much overdue attention.

In 1983, a report was written for the Environmental Council, reviewing the present knowledge of our wetlands including, their extent, management and the policies affecting them (Environmental Council's Wetland Task Group, 1983). The report also suggested

future management and conservation options for our wetlands. Although now somewhat out of date, this publication is the most comprehensive work on wetlands yet compiled in New Zealand. Much of what was included in the 1986 New Zealand Wetlands Management Policy had been adapted from this earlier publication.

One of the recommendations in the 1983 report was that Government should ratify a wetland policy (p.61). Later in the publication, (appendix 6) the Council presented a possible draft policy statement, and it was this which formed the basis of the policy adopted in 1986 (the 1983 draft policy proposal is included in the first appendix of this report).

It is my opinion, that the 1986 policy was designed with a 1970's or early 1980's perception of wetland management. It did not anticipate changes in national economic policy, that were to occur later in the 1980s, and will correspondingly affect the future of wetlands through the 1990s.

Our knowledge about wetlands and their functions is poor, but improving, and our ideas about the management of natural habitats are evolving. Therefore, while our policies for natural systems should reflect our current knowledge, understanding and values, they should also be designed to accommodate new information and changing perceptions.

In this report I make one major assumption; that society's desire to conserve wetland ecosystems has not changed since 1986. If this assumption is correct, then the 1986 Policy objectives are still valid. Those objectives are; the preservation and protection of wetlands, the completion and maintenance of a wetland inventory, and increasing public awareness of wetland values.

It is the manner in which these objectives are expressed, and the effects of recent changes in New Zealand's economic policy, which leads me to believe that the policy should be reviewed.

Therefore, the aim of this study is to show that the 1986 New Zealand Wetlands Management Policy requires review, so as to be of relevance in the 1990s. To do this I will describe some of the major changes in New Zealand policies and the New Zealand economy, and discuss their effects on wetland management. I will also discuss the short comings of the 1986 New Zealand Wetlands Management Policy, and provide some possible alternatives.

Chapter 2 is a background chapter and describes wetlands as both resources and habitat types. Included, are reviews of the management, exploitation and conservation of wetlands, the legislation which affects them, and lastly, a discussion of the reasons why a wetland policy is required.

Chapter 3 discusses changes in the New Zealand social and economic environment, attributable to new government policies, and which affect New Zealand's wetlands. It includes a discussion of the Treaty of Waitangi, the restructuring of government departments, the Environment Act 1986, the Local and Regional Government Reform and the Resource Management Law Reform.

Chapter 4 includes a discussion of the objectives in the 1986 Wetlands Management Policy, followed by a discussion of the ways in which the Policy could be altered to better suit the 1990s.

Chapter 5 concludes, and lists the recommendations for changes to the policy.

CHAPTER TWO

THE BACKGROUND STORY

2.1 The Nature of Wetlands_

This chapter is a discussion of the nature of wetland resources and ecosystems. Wetlands are discussed largely in the New Zealand context.

Included, is a general discussion of the nature of wetlands, their definition, classification and formation. Wetland values are discussed in some detail, as is the discussion on the status of wetlands in New Zealand.

2.1.1 A Wetland Definition

The wide variety of wetland types has caused problems in both their definition and classification. The ~~currently~~ accepted definition in New Zealand, is presented in the New Zealand Wetlands Management Policy (Commission for the Environment, 1986 p.3):

" A collective term for permanent or intermittently wet land, shallow water and land-water margins. Wetlands may be fresh, brackish or saline, and are characterised in their natural state by plants or animals that are adapted to living in wet conditions."

This definition covers all wetland ecosystems found in New Zealand, and includes fertile swamplands, peat bogs, estuaries and braided rivers, alpine tarns, pakihi swamps and lake margins.

Many wetlands cannot be defined as a single type; either because they are intermediate between types, or because they are a combination of different types, and form wetland complexes (Ogle and Cheyne 1981).

Presented in Appendix 2, is a comprehensive classification system for New Zealand's wetlands (Environmental Council 1983), and illustrates the inherent problems, involved in their classification. It illustrates the complexity which occurs when trying to provide a comprehensive and practical classification system.

The problem of defining 'wetland' is important not only to scientists and geographers, but in some parts of the world, has become a major legal and financial issue (Maltby 1986). Therefore, despite the problems of definition and classification, there is value in pursuing these objectives.

2.1.2 The Wetland Ecosystem

Compared with other natural forms of landscape, wetlands are young and dynamic. They can change in character dramatically over very short periods of time, or they may appear to be relatively unchanging for long periods (Maltby 1986). An unchanged appearance is often deceiving, as complex processes of change are continually under way within these systems.

Wetlands are among the most fertile and productive ecosystems in the world. They are essential life-support systems and play a vital role in controlling water cycles (Maltby 1986; Williams 1982).

One wetland, is often many different wetlands, plant and animal species changing according to the depth, duration and volume of flooding, the geography and soil (Maltby 1988). This makes wetlands extremely complex ecosystems. Coastal wetlands are often the most complex because they must cope with both saline and freshwater conditions. These systems are correspondingly often the most productive, as this environment is favorable for many life forms (Barnes 1980).

Wetlands are susceptible to modifications, either occurring directly to the wetland or in their catchment areas. Their inherent fragile quality is compounded, because damage in one part of the habitat often leads to the destruction of the whole wetland (Good et al. 1977). To make matters still worse, because of their complexity it is usually impossible to repair the damage.

Wetlands are also temporal ecosystems (Williams 1982). Each wetland has a lifespan which is dependent on a number of factors. These include; wetland type, catchment, climate, and the extent of modification by man. The lifespan of an individual site may be anything from a few hundred years to a few hundreds of thousands of years.

2.1.3 The Values of Wetlands

We place many different values on wetlands, depending on our knowledge and understanding, experiences, preferences and culture.

The wetlands, both inland and coastal, are highly valued by the Maori as important areas for food and fibre gathering. Traditional Maori use of wetlands has been restricted by wetland modification, restriction of access in some areas, and European regulations concerning the use of the wetlands resources (Salmon 1987).

Until relatively recently, the traditional Western view of wetlands has been largely negative. It included the image of wetlands as wastelands, of wet, smelly and muddy places, which bred diseases, but which were useful as dumping areas (Burns 1982; Environmental Council 1983; Maltby 1986).

There have of course been individuals who have recognised the natural values of wetlands, including, the early 20th century naturalist Aldo Leopold, and the painters John Constable and Pieter Brueghel. However, those few positive values recognised by the majority of people, were largely the exploitative values; hunting and fishing and fuels.

In the past few decades, the greater importance of wetlands has been slowly recognised by developed countries. This has in turn led to the acknowledgement of many different wetland values (Navid 1988).

Wetland values can be broadly classified as either exploitative or concerned with the conservation of wetlands. These values often conflict, as may different values within the each group.

A very brief description of the major values presently placed on wetlands follows.

2.1.3.1 Exploitative Values of Wetlands

Mining the Resource

The term mining is used broadly to include the following activities :

- a) peat mining, which has been considered for various peatlands, such as, the Chatham Island peatdome.
- b) sphagnum extraction on the Westcoast of the South Island (Denne and Sharp 1983).
- c) kauri gum extraction in the North of the North Island.
- d) ironsand gravel and quartz sand extraction.

- e) opencast mining of coal and lignite, such as has been suggested for Lake Tuakitoto (Watson 1984), Waituna Lagoon and various wetlands in the Waikato, including Lake Ohinewai and Lake Rotokauri (Penny 1983).

Farming the Resource

Previously drained wetlands have provided New Zealand with some of its most productive land. Mineral soils (fertile swampland), can simply be drained and brought into production. Peat soils, however, suffer from shrinkage following drainage, and may require the use of extensive and expensive drainage systems (Good et al. 1977; Environmental Council 1983).

The practice of converting wetlands to forest plantations, has been considered in a number of regions, in particular the West Coast, South Island. Normally this involves draining the soil, and replanting with Pinus radiata. This has had a significant effect on the extent of pakihi, and forested lowland wetland on the coast (Smith 1986). Natural forested wetlands, were once common throughout lowland New Zealand, but are now rare, largely due to logging.

The most recent form of farming of wetlands, is that of aquaculture. Species which are being considered for this form of farming include, mussels and oysters for estuarine habitats, eels in many rivers and inland wetlands throughout the country, and salmon on the east coast of the South Island.

All fisheries rely on the natural productivity of the wetlands, and therefore rely on the maintenance of viable wetland ecosystems (McDowell 1982, 1984).

2.1.3.2 Conservation Values of Wetlands

Hydrological Values

All wetlands have different hydrological characteristics that reflect their geology, climate, gradient, catchment area and adjacent land use (Sutherland 1982).

The hydrological values of wetlands are known to be very important, even though they are only poorly understood. These values relate to the ability of wetlands to act as sponges in time of flood, and reservoirs in times of drought (Barnes 1977).

There is also an unrelated potential use for some types of wetlands, in the management of organic pollution. Research into this field is still in its infancy, but it relates to the ability of some wetlands to extract nutrients from their waters (Dugan 1988).

Ecosystem Values

The wetland ecosystem provides habitat for many species of birds, fish, insects and plants, many of which are specifically adapted to living in their respective types of wetland. In New Zealand, these include the endangered black mudfish which is found only in scattered wetlands of the northern North Island (Town 1981); the marsh crake, banded rail, and bittern found in greatest numbers inland wetlands, and the kotuku which breeds only at Okarito in Westland.

The best known wetland inhabitants are birds. The number of different species which use wetlands is impressive. For example, at Lake Ellesmere in North Canterbury 116 species of birds have been recorded (Stephenson 1988). Furthermore wetlands are critically important for migratory species, which may travel great distances to reach our coastal wetlands (Sagar 1982).

Study has shown that of our 27 native species of freshwater fish at least 8 are habitually found in various types of wetlands, and another 4 occasionally (McDowall 1982).

The plants of wetlands are highly specialised. They have had to adapt to surviving in water-logged soils, withstanding changes in water quality, lack of nutrients and many other seemingly impossible environmental extremes (Partridge 1982). They have done so with amazing ingenuity, perhaps epitomised by such species as the sundews, which obtain their nutrients from animals trapped in their sticky excretions.

The most important feature of 'wetland' ecosystems (as with any other), is that it is a system. All components of it are interconnected and depend on one another for their continued viability. Intricate food webs and nutrient chains connect each part of the wetland to the other. Wetlands are rather special in this respect, and tend to utilise a greater diversity and quantity of inputs from outside their systems. Possibly it is this feature which makes them so susceptible to changes in their surrounding catchment areas.

Educational and Scientific Values

The educational and scientific values of wetlands have, up until now been largely neglected (Malbty 1986).

Wetland research is still in its infancy throughout the world. This is largely due to a negative view of wetlands.

However, research is a necessary prerequisite to successful management of wetlands, and needs to be encouraged.

Wetlands provide the perfect classroom for ecology. All the classical ecological concepts are illustrated within them. For example, peat swamps provide classic examples of 'ecological succession', where a plant community changes the environmental

conditions so that it becomes less favorable for it's own survival but more favorable for the development of a different community. However, wetlands are rarely used in education, due to their poor image (Maltby 1986).

This is unfortunate as they are often accessible, and rich in the plant and animal life which are so important to mankind.

Recreational Values

Recreational activities associated with wetlands have been realised for many years, particularly for their value to hunters and fishers. In recent years many other forms of recreation have been recognised; such as, boating, canoeing, tramping, photography and nature education.

Some of these values conflict with wetland conservation values, in particular noisy or habitat destroying activities, such as, jet boating and hunting.

Landscape Values

The landscape of wetlands is often more subtle than in other natural ecosystems, and is sometimes overlooked. However, they do play an important part in our life experience. For example it would be difficult to imagine the Canterbury plains, without conjuring up the image of braided rivers.

Cultural Values

All cultural values change and evolve over time, but there are often extreme differences in the perceptions of nature, by different races and cultures. The present cultural view, which is reflected in New Zealand, is still the traditional negative

view of wetlands, with a generally exploitive attitude to natural habitats in general. This is the common attitude in most of the developed countries of the world (Maltby 1986).

Within New Zealand we must learn to recognise both the Western and the Maori values of wetlands. The Maori used the wetlands as important sources of food and of various plants. However, they also have a strong spiritual connection with the land and water. It is these values which are the most difficult for Europeans and our laws to come to terms with and accept (Patrick 1987).

2.2 The Management, Mismanagement and Conservation of Wetlands

It has been acknowledged worldwide, and more specifically in New Zealand that wetlands are both diminishing resources and habitats (Environmental Council 1983, Maltby 1988). New Zealand has followed the example set by many other developing countries, by destroying many of its wetlands, in the desire to put the land into more 'productive' use, (normally agriculture) (Burns 1982).

Presently New Zealand has retained less than 10% of it's former wetlands which is roughly equivalent to 1.5% of the land area of New Zealand, (Blaschke 1981). Some regions have less than 1% of their areas under wetland (Rudge 1986).

The loss of wetlands has not been homogeneous throughout the country, and the degree of destruction of different wetland types has varied considerably. Loss has been due to numerous causes including; kauri gum digging in the northern North Island, gold mining in the pakihi swamps of the South Island, flax milling throughout the country, pastoralism, particularly in the South Island, and general land clearance, timber milling, land drainage and flood control schemes throughout the country (Environmental Council 1983).

These activities have been the most obvious, but others are less conspicuous, such as; the drainage of wetlands for urban development, coastal reclamation, coastal and river gravel and sand extraction, and increased non-point-source water pollution.

The modification of surrounding land use patterns and the altering of the quality or levels of inputs into wetland systems, are also factors whose influences are often grossly underestimated.

In the past, the main emphasis has been on the exploitation of wetlands rather than the management or conservation. In 1976, New Zealand signed the Ramsar Convention, otherwise known as the IUCN Wetlands Convention. Under this convention, signatories agree to include wetland conservation in their national planning and to promote their sound utilisation. Signatories are also required to list one wetland, as a wetland of international importance (Maltby 1986). New Zealand has listed two sites since signing the convention 12 years ago. In comparison, Canada has nominated 15 sites in all, and Australia, in the last few years added 20 sites from just two of its states, totalling an area of 271,043 hectares (Navid 1988).

New Zealand's two sites of international importance are, Farewell Spit in Nelson and Waituna Lagoon in Southland.

Farewell Spit is a reserve covering areas above the low-tide mark and in total consists of 11,500 hectares.

The Waituna Lagoon is reserved only up to high-water mark, and none of the surrounding buffer zone, or the surrounding valuable wetlands, (Awarua Bog and Seaward Moss) have any legal protection (Mark 1985). Its nomination as a wetland under the IUCN convention has no effect on its status of protection in New

Zealand. The reason that this ecologically important area, does not have total reserve status is because of the reserves of lignite under the site (Environmental Council 1983).

It is clear that in 1976 New Zealand was not taking seriously the principles involved in the IUCN convention (Environmental Councils 1983), and there is little evidence to suggest that it is taking it seriously now. The Waituna Lagoon has not gained reserve status, despite considerable public pressure. No other wetlands have been nominated to the list of Wetlands of International Importance, although there are a number which undoubtedly qualify, including the Whangamarino Wetland in the Waikato (Ogle and Cheyne 1981), and Lake Ellesmere in north Canterbury (Palmer 1982, Stephenson 1986), and Lake Wairarapa (Moore 1985).

Legislation has in the past favoured the exploitation of wetlands and this situation has changed only slightly in recent years. The Reserves Act (1977) and the more recent Water and Soil Conservation Amendment Act (1987) do give some protection to wetlands, but for as long as other Acts, such as the Mining Act (1971) can over-ride all other Acts, the protection of any wetland is not permanent.

2.3 The Legislation Affecting Wetlands

Many laws impinge upon the management of wetlands. Current legislation can be divided into those which provide protection, and those which aid development of wetland resources.

Before the late 1970s, most of the laws relating to wetlands management were primarily concerned with the development of the

wetland systems. However, those formulated since the late 1970s, have also provided for the conservation and protection of wetlands.

The vast collection of relevant Acts are administered by numerous governmental bodies, including, the Ministry of Energy, Ministry of Agriculture and Fisheries, Department of Conservation, and Local and Regional Government bodies.

Some legislation affects wetlands more than others. At present the three most important Acts are, the Reserves Act (1977), the Town and Country Planning Act (1977) and the Water and Soil Conservation Act (1967), (Environmental Council 1983).

The Reserves Act (1977) is the most important single piece of legislation to date, in terms of providing for the protection and conservation of wetlands. One of the functions of this Act is to ensure the preservation of representative classes of natural ecosystems, and in so doing provide for the creation of reserves of different types to provide this protection.

The Town and Country Planning Act (1977), has a number of provisions which apply either directly or indirectly to wetlands.

They include:

"The preservation of the natural character of the coastal environment and the margins of lakes and rivers and the protection of them from unnecessary subdivision and development." (Section 3,(1)(c)).

The First Schedule identifies those matters that should be dealt with in Regional Schemes, and includes the identification, preservation and development of natural resources. The Second and Third Schedules deal with District Schemes and Maritime Schemes respectively, and also have preservation and conservation functions. Many Councils have not fulfilled their obligations under this Act (with respect to wetlands), but there are notable

exceptions including Waitemata City, Pahiataua Borough and Marlborough County (Environmental Council 1983).

The Water and Soil Conservation Act (1967) and subsequent amendments, is a multi-use Act, as is the Town and Country Planning Act (1977). The Act provides rights for damming, diversion, abstraction or discharge affecting natural waters.

The main function of the Act is:

"to promote a national policy in respect of natural water, and to make better provision for the conservation, allocation, use and quality of natural waters."

Adequate account must taken of the needs of,

"primary and secondary industry, community water supplies, all forms of water based recreation, fisheries, and wildlife habitats, and other natural characteristics of rivers, streams and lakes."

The 1981 amendment to this Act provides an instrument for the protection of natural waters in the form of Local Conservation Orders (LCO), and National Conservation Orders (NCO). Any public or local authority, constituted by or under any Act, and any Minister of the Crown, having any function, duty or power that is or could be affected by an aspect of water or soil conservation, may apply for a water conservation order to be made.

The only wetland which has benefited from the protection gained from this amendment, thus far is the Rakaia River in Canterbury which is protected by an NCO. Other wetlands, which have been nominated for protection include, Lake Wairarapa, Lake Ellesmere and Lake Tuakitoto (Guest 1987).

The main emphasis of the Act is, however, not planning but rather the provision of an organisational structure, and some procedures for administering the use of water and soil resources (Russ, 1987).

There are many other statutes which are important to wetland management, including the Mining Act (1971) and the Coal Mining Act (1979), the Land Act (1948), the Swamp Drainage Act (1915), and the Public Works Act (1981). All of these Acts are important because they have the power to drain or otherwise modify wetlands. The Coal Mining Act (1979) and the Mining Act (1971) are very powerful, and it is within the rights of these Acts to grant mining licences on any land what-so-ever.

Another important Act, the Queen Elizabeth the Second Act (1977), provides for the preservation of private land by the owners. This Act represents a relatively new approach to habitat conservation, and may be of increasing importance in the future as a way to protect open spaces in private ownership.

In summary, there are at present, an excess of laws which in some way impinge on the management of wetlands. The decision to reform the resource management laws, was partly due to such situations, where laws relating to natural resources were too numerous, complex and scattered to allow an integrated approach to resource management.

Both the Resource Management Law Reform and the Local and Regional Government Reform, are likely to lead to enormous changes in the laws relating to wetland management.

2.4 Why was a National Wetland Management Policy needed?

The reason for formulating the New Zealand Wetlands Management Policy (1986), and its ratification by the Government, was to provide some clear guidelines for the agencies and individuals involved in activities connected with wetland management.

There are many reasons why I consider a wetland policy is a necessary objective.

- a) The laws relating to all aspects of wetland use are scattered, often conflicting and administered by a large number of different agencies. This makes consistent and integrated decision-making difficult. A National Wetlands Policy may provide some sort of guideline for decision-makers (Burns 1982, Environmental Council 1983).
- b) Wetland ecosystems are rapidly diminishing. They are highly complex, variable and fragile habitats. They contain a large number of endemic plants and animals,

which are able to live only in these environments. There are few laws protecting them. Therefore a policy concerned with conserving them may strengthen their likelihood of survival.

- c) A wetlands policy is also important in economic terms. Wetlands preservation is required for the continued viability of many freshwater, and some marine and shellfish species; which are of present and future importance to our fishing industry. Wetlands are also economically important because of their recreational and tourism potential.
- d) A New Zealand Wetland Policy also helps increase public awareness of wetland values.
- e) The hydrological values of wetlands, though poorly understood, are known to be important, and a policy may help the preservation of hydrologically important wetlands.
- f) A policy could provide some direction in the management of what is a multi-use resource.
- g) Lastly we, as humans have a moral responsibility to protect the environment in which we live. A wetlands policy may help us practice this responsibility.

2.5 Summary

Chapter 2 has provided a discussion of the state and status of wetlands in New Zealand.

It has described how the traditionally negative view of wetlands has led to the modification and destruction of wetlands in New Zealand, and the slow recognition of their values among the European community. This attitude has been reflected in the laws relating to wetland management, and the limited recognition by New Zealand of the IUCN Convention on Wetlands of International Importance.

However, slowly, other values have been recognised, and these have led to an increased commitment to the conservation of wetlands, which has been reflected in an increase in conservation laws and the formulation of a national wetlands policy.

CHAPTER THREE

CHANGING THE RULES OF THE GAME

3.1 Changes in Government Policy

The 1980s have been a decade of change in government policy in New Zealand. It has been stated by various individuals, with a strong interest in politics, that this decade has been one of the most important in the last half century, for example;

"I believe that the current period in New Zealand is producing economic and social change as radical as any experienced in our past. Perhaps only the 1860s, the 1890s and the 1930s show anything comparable and in my view even those important eras do not match in historical significance what is happening now." (I.J.Douglas, 1985:p.v)

One could also include changes in environmental policy within the above statement.

Changes in environmental policy this decade have included, the introduction of the Soil and Water Amendment Act (1981); the Environment Act (1986), and the Conservation Act (1987). The establishment of Ministry for the Environment, the Department of Conservation and the state owned enterprises such as Landcorp and Coalcorp are also recent changes. These changes will soon be accompanied by new legislation, for the management of our natural resources.

Many, although not all, of the major changes in government policy have occurred since the 1984 general election, when the fourth Labour Government gained power.

In their Official Policy Release (1985), the Labour Government pointed to changes which were likely to occur under a Labour government, they included;

"The next Labour Government will protect and enhance the natural environment and carefully integrate conservation and development."

and,

"Labour will reform the system of local and regional government to improve its autonomy from central government, its accountability to its electors, and to create a more efficient and democratic structure."

These two examples prepared the community for changes in environmental policy, resource management laws, and the Local and Regional Government reform.

In essence, the first of the statements from the official policy release, suggested that the government would make a commitment to the conservation of New Zealand's natural environment.

Many of the changes in environmental and economic policy have had direct or indirect effects on the management of wetlands. These effects include; problems arising from changes in ownership of land occupied by wetlands, amalgamation of various sectors of government departments concerned with conservation, and the removal of land development incentives and subsidies for farmers and foresters. However, whether all these changes have actually led to improvements in the area of wetland management, has yet to be proven.

When the Labour Government took office in 1984 there was general unrest in the country as to the state of the national economy.

It was clear that which ever political party won the election they would be faced with some major economic problems. These problems had built up over many years, and were due to a wide range of factors, including a deterioration in the terms of trade for agricultural products ; the oil crisis of the 1970s, which led to the development of large scale 'think big' energy industry

schemes, (which the country was unable to afford without massive overseas borrowing); and the high value of the New Zealand dollar, and the rate of internal inflation. The result was that New Zealand was not able to compete with other overseas markets, and this was blamed on years of over regulation and interventionism (The Treasury, 30.7.1984, Douglas 1985).

The Government, believed that unless the massive subsidisation of our industries was removed, and we faced the real costs of our activities, we would remain uncompetitive. Treasury, in their publication, "Economic Management Land Use Issues" (1984) stated their opinion:

"The profitability of traditional agriculture has been adversely affected for a protracted period by a cost\price structure that has been out of line with that of the rest of the world. In recent years, substantial compensatory assistance delivered via SMPs have led to different, though also serious, distortions." (p5)

and,

"Reductions in both assistance disparities and in the average level of industry assistance will result in a more efficient use of resources and higher national income." (p13)

It was decided by the government, that New Zealand's economic future would only become brighter in a non interventionist and de-regulated environment.

For many years wetlands had been suffering from the effects of land development made possible by the subsidies and incentives for agricultural and forestry development. Their abolition was of great importance to the continued existence of many wetlands (Rudge 1986, Smith 1986).

Prior to 1984, there were a number of different subsidies and incentives provided to farmers and foresters, which affected wetland management, they include; Land Development Encouragement Loans, and Forestry Encouragement Grants. The amounts of money

paid out in these loans was large. Between 1978 and 1982, the Rural Bank lent 7.7 million dollars for the 'development' of land, a significant amount of which went into the draining and development of wetlands.

Part of the reason these loans were such a threat to wetlands, was that the terms under which they were given were generous. For example, the Land Development Encouragement Loans, were effectively interest-free and only half of the capital sum had to be repaid, if the landowner completed the development satisfactorily (Treasury 1984, Rudge 1986).

To achieve their objectives, the Labour Government had to formulate new policies for the whole social and economic environment. The new policies which have, or are likely to have the greatest effect on the management of wetlands include, the introduction of user-pays principles, free market economics (which include de-regulation and a non-interventionist approach to agriculture, public sector restructuring, and the Resource Management Law Reform (RMLR), and the Local and Regional Government Reform (LRGR).

Figure 1 is a simplified illustration of government objectives since 1984, and the policies which they have introduced. I have concentrated on the period since 1984, because I believe that it is the policy changes introduced since that time, that have led to many changes in wetland management and should be taken into account in any revision of a wetlands management policy.

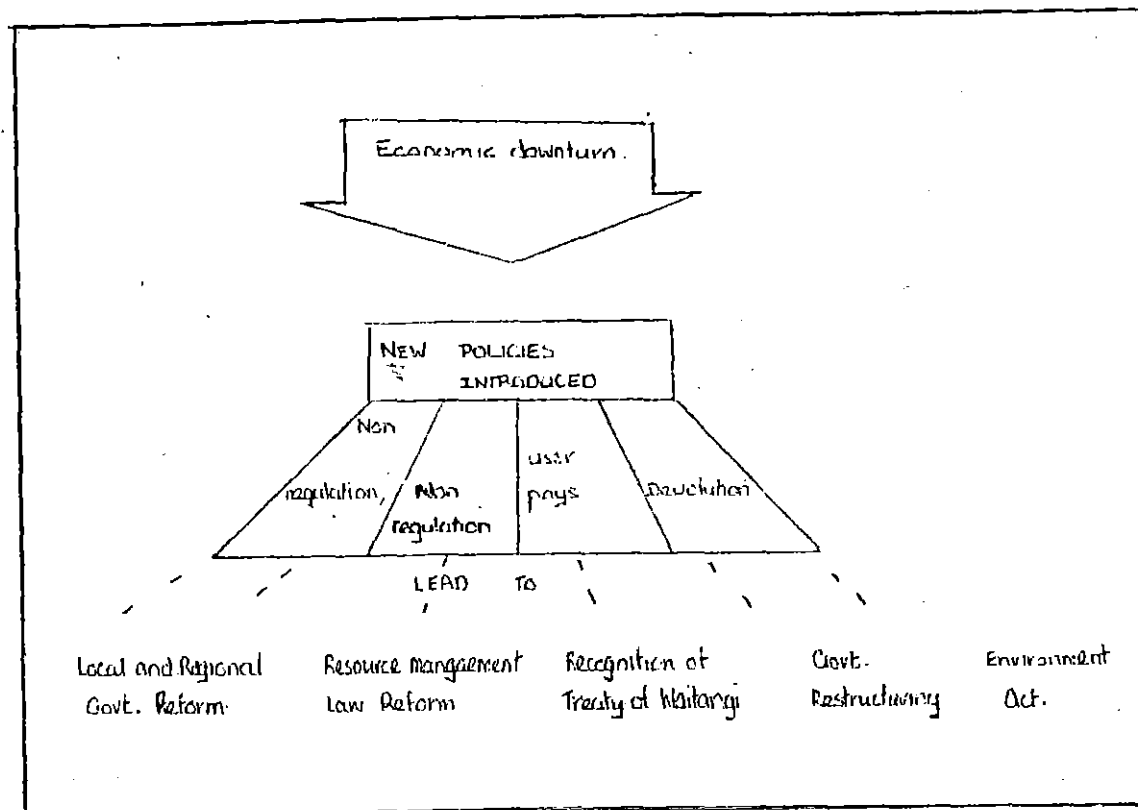


Figure 1 reads from the top down. It focuses on four central government objectives.

- 1, Non-intervention.
- 2, De-regulation.
- 3, User pays.
- 4, Devolution.

These objectives are reflected in changes in policies, laws and actions. I will discuss five changes, which are likely to have a great effect on wetland management.

They are:

- the formulation of the 1986 Environment Act;
- the two reforms, i.e. RMLR and LRGR;
- the restructuring of government departments;
- the recognition of the principles of the Treaty of Waitangi.

These and other changes will affect the national economy and will lead to even greater changes in the social, economic and environmental aspects of wetland management.

3.2 Recognition of the Principles of the Treaty of Waitangi

The Treaty of Waitangi Act (1975), and the amendment in 1987 now allows for claims dating back to 1840 to be heard. For the first time, Maori interests in wetlands is open to judicial review.

The government policies involving the transfer of lands from government departments to state-owned enterprises has made it imperative that the Government sort out the question of ownership of natural resources and land.

The process of establishing ownership has proved more difficult than was initially imagined by some, and has slowed the speed of many of the reforms. This should not have been unexpected as it has taken approximately 150 years to reach the present situation.

Any changes in property rights are likely to affect wetlands. This is because a change in ownership can alter the way in which a wetland is managed. The change can be to the benefit of

wetlands, as a new owner or owners may be more sympathetic to the values of wetlands.

It is hoped that this will be the case with the changes in ownership of wetlands to the Maori, and that they will be able to afford to manage wetlands in a traditional manner.

Many wetlands, particularly in the North Island, are at present designated Crown land (Thompson & McCraw 1981). It is many of these wetlands which may be returned to Maori ownership. More wetlands, will then be in private ownership, and the general public will have less influence in the management of these wetlands.

3.2.1 The Effect of the Recognition of the Treaty of Waitangi on the New Zealand Wetlands Management Policy

The 1986 New Zealand Wetlands Management Policy recognises that there are Maori values for wetlands, but does not contain explicit recognition of the principles of the Treaty of Waitangi, or any specific values that the Maori people may place on wetlands (Foreword, p.1). It is difficult to anticipate the effects that changes in ownership will have on the management of wetlands. If wetlands can be managed according to traditional Maori custom, they may be better protected than at present. However, Maori communities are likely to face economic pressures to develop their resources, in order to maintain or improve their Western living standards and opportunities.

These pressures are likely to have increased over recent years, with Maoris being disproportionally represented in unemployment statistics. In order to improve their living standards, Maori managers may feel pressured to exploit their resources.

It is ironic, that the non-interventionist government objectives, which some environmentalists have recommended, believing they will lead to a reduction in wetland drainage by farmers and foresters, are the same factors which may cause others to become more exploitive. (Rudge 1986, Salmon 1987).

3.3 Restructuring of Government Departments

The aim of much of the departmental restructuring was to separate regulatory and policy functions from commercial functions (Boston 1986). In this way, for example, the Department of Lands and Survey was divided into, the state owned enterprise Landcorp, and the Department of Survey and Land Information.

The restructuring also led to the formation of the Department of Conservation (DOC). DOC was an amalgamation of all the environmental sections of the restructured departments, including the Wildlife Service and Historic Places Trust (both previously part of the Department of Internal Affairs), and sections of the Department of Lands and Survey and the Forest Service.

The merging of these groups was expected to lead to greater efficiency, in both the use of the resources available to conservation, and in the actual process of conserving. For wetlands, the establishment of DOC should have led to an integrated management programme for wetlands, with resources being easier to direct to areas of greatest need. What appears to have occurred is less promising for wetlands.

Previously, expertise in conservation and environmental management was spread throughout the departments dealing with natural resources; they are now grouped together within one

department. This may mean that, whereas previously, departments were obliged to consider environmental factors within their plans of development, they are no longer required to do so.

Another worry for those people concerned with conservation, is that much of this expertise, built up over decades across the Government sector, has been lost. The new department did not provide jobs for all, and when those who did not find a position left, the agency lost both expertise and experience.

While it is impossible to quantify the magnitude of this loss, the fact remains that government agencies have lost much of their expertise in wetland management. It will take time for innovative or new conservation and management practices to emerge.

The establishment of the state owned enterprises (SOEs) is also likely to create problems for the conservation of wetlands. The SOEs are expected to run on a commercial basis, and are likely to have little interest in non-profit making activities. Of even greater concern, is the real possibility that some of the SOE's may be sold, and with them their assets; our resources.

3.4 The Environment Act

The Environment Act 1986, is administered by the Ministry for the Environment. It is the aim of both the Ministry and the Act to protect the quality of the environment. One could interpret the Act as a bill of rights for the environment, with the Ministry acting as a go-between conservation and development interests.

The Act may in future become very significant for the maintenance of environmental quality in this country, although this will largely depend on the way in which the Act is

interpreted, and the status it is given. In the short time that it has been in law, its effect has not been particularly great.

The long title of the Act is open to wide interpretation. This is because the general concepts and terms it introduces are not defined (see appendix 3).

These concepts are:

- the principles of the Treaty of Waitangi;
- values placed by individuals and groups on the quality of the environment;
- sustainability of natural and physical resources;
- the needs of future generations;
- intrinsic values of ecosystems.

The Treaty of Waitangi (see 3.2) is a concept about which at least the words are understood by most people, even though the implications and problems associated with the Treaty are a challenge to solve.

The terms sustainability and intergenerational equity, are very closely related. Sustainability, in extremely simplistic terms, is to do with maintaining the viability of environments. The needs of future generations, addresses the concern of maintaining viable systems for future generations.

The intrinsic values of ecosystems, are those values possessed by the ecosystem, but not imposed by humankind. In other words, a wetland possesses an intrinsic value just because it exists. Belief in intrinsic values is largely a matter of faith, with some people denying the possibility of their existence, and others convinced of them.

Intrinsic values which are taken into account when considering development projects, include not only the short term economic values, but also the longer term economic and social values, and the values of the environment. If the Environment Act were to be interpreted in this way, and given enough status,

it could become a very useful tool for the conservation of the environment. It is in this context that the Environment Act may help in the management of wetlands.

There is a real threat to the sustainability of wetlands ecosystems in New Zealand. If the development of wetlands continues at the present rate there are unlikely to be many natural wetlands capable of remaining viable within a few generations. Many distinctive types of wetlands cannot be created artificially, and so if lost and their evolution restricted, they and all their unique values will be lost forever. Accounting for both sustainability and the needs of future generations is therefore an important consideration.

It is perhaps surprising that the contents of the Environment Act were not more strongly reflected in the New Zealand Wetland Management Policy, as it was formulated in the same year. The policy recognises that wetlands have cultural values to the Maori, and the objectives mention the need to retain wetlands for future generations. However, sustainability and intrinsic values are not mentioned.

It would seem sensible to integrate a revised wetland policy with those statutory tools which are presently available. I believe a revised wetlands policy must acknowledge the important concepts embodied in the Environment Act. This would have benefits for both the wetland policy and the Act, as repetition of these concepts in various statutes is likely to promote greater discussion and debate.

3.5 The Current Reforms

The Local and Regional Government Reform (LRGR) and the Resource Management Law Reform (RMLR) were begun in 1987.

These reforms were not in progress when the Wetland Policy (1986) was formulated, so they could not be taken into account. The results of both reforms are as yet unknown, and it is difficult to determine their effect on wetland management policy. There are, however, some hints of the shape of things to come, and these will be discussed in this section, in terms of both wetland management and the wetlands policy.

3.5.1 Background to the Local and Regional Government Reform

"Over the past 100 years local government institutions and structures have contributed much to this country's development. But while almost every other aspect of New Zealand life has changed extensively in that time, the structures of local government remain largely unchanged." p(i) (Hon Dr M.Bassett, 1988).

In December 1987, as part of the Government's Economic Statement, there began a comprehensive and complete review of the local government, with the intention of having new local government structures in place by the 1989 local authority elections.

Included within the review was a reassessment of the functions, structures, funding, organisation and amount of accountability present within local government.

Local government as we know it, was established in New Zealand in 1876, with the abolition of the Provinces. Before this time, New Zealand was administered by six, and later nine, provincial councils. After the abolition of the Provinces the country was divided into counties and municipalities. The number of these has risen, to a total of 217 in 1988.

Along with these multi-purpose bodies has grown a wide variety of single-purpose bodies, (commonly referred to as special-purpose or ad hoc local authorities). The first special-purpose authorities were established as early as 1870,

and by 1988, had reached 453 in number (The Official Coordinating Committee on Local Government 1988).

The most recent major development in local government structure took place in 1963, with the establishment of regional councils. These were set up because of dissatisfaction with the exclusively local system, which was so fragmented as to be unable to react to the needs of whole regions (The Official Coordinating Committee on Local Government 1988).

We now have the grand total of 828 local authorities within New Zealand.

According to Hon. Dr M. Bassett, the general objectives of the local government reform are:

- a) that individual functions should be allocated to local or regional agencies which represent the appropriate community of interest;
- b) operational efficiencies are desirable;
- c) any authority should have clear non-conflicting objectives;
- d) trade-offs between objectives should be made in a explicit and transparent manner;
- e) clear and strong accountability mechanisms should be encouraged.

In the opinion of the Local Government Commission, the improvement of local government requires: the creation of smaller numbers of bodies, and the creation of marginally and technically stronger units which will correspond to current, not historic communities (Ibid 1988).

Resulting from the review, 13 regional authorities have been recognised; a reduction from the previous 22.

3.5.2 Background to the Resource Management Law Reform

The Resource Management Law Reform was announced in 1987. It followed much discussion about the vast collection of resource management laws presently in use. The various complaints about present laws included; high costs of working within them, their complexity, legalistic, bureaucratic and overlapping characteristics. There were feelings that the laws placed both too many, and too few restrictions on individuals. Greater public participation, recognition of Maori values and the objectives embodied in the Environment Act 1986, were considered important issues needing inclusion in the new resource management laws (Ministry for the Environment, 1988).

The purposes of the reform as stated by the Rt. Hon G. Palmer (Address to the 7th International Conference of Chief Executives in Local Government 1988) were to:

- a) integrate planning law and procedures;
- b) streamline and simplify the law;
- c) provide for sensible procedures for planning;
- d) give the responsibility for administering the law to local government with minimum ability for central government to intervene;
- e) ensure that the environment is protected;
- f) provide methods which promote the wise use of resources.

Laws which are being reviewed in the reform, include all laws concerned with natural resources, excluding the Environment Act (1986), and the Conservation Act (1987).

3.5.3 The Effects of the Reforms on the Management of Wetlands

Local and regional authorities often have to wear two incompatible hats. The bylaws and planning ordinances which they administer are intended to protect the public and the environment from damage. However, the authorities, are themselves often important developers, or encourage development (Bush 1980).

There already exist, therefore, significant conflicts of interest within and between sectors of local and regional Government. An example of these conflicts of interest, can be seen in the Catchment Authorities. Among their functions is the granting of 'rights' to people wishing to develop water resources. At the same time, however, they are also expected to protect water resources, through the administration of the Soil and Water Conservation Act (1967) and its subsequent amendments.

One of the outcomes of the LRGR, will be the abolition of special-purpose bodies (such as the Catchment Authorities), and the distribution of their functions between, the new Local and Regional Government Authorities and private enterprise.

Therefore, it would appear quite justified, to doubt the ability of the new Local and Regional Government Authorities, to have non-conflicting goals.

The new regional boundaries are to be based on catchment boundaries and communities of interest. To provide adequate management for wetlands, the whole catchment of a wetland or wetland complex should be considered, and for this reason the new boundary criterion will be useful for future wetland management.

Regions which feel united, work better together, rather than communities which have been arbitrarily placed together for convenience. However, the 'communities of interest' criterion, may be deleterious for wetland conservation, when those communities interests are biased towards wetland drainage. For

example, in a rural region where agricultural and horticultural interests are dominant, the interest in wetland conservation may be low.

The reduction in the number of regional authorities, and the abolition of the special purpose bodies, may eventually lead to a more integrated approach to the management of wetlands. However, it may also lead to an increase in the scale of conflicts of interest, between development functions and those mainly concerned with management and conservation.

Possibly the most important outcome as yet, from both reforms, are the conclusions concerning the importance of regional government.

A report, 'A Framework for a Future Regional Government Policy' (Peat Marwick 1988), included the following figure, indicating those functions which are best performed by the various sectors of Government.

| | | | | |
|---|---|--|---|--|
| <p>CLEARLY CENTRAL</p> <p>External Relations Human Rights Defence Customs Immigration/ Citizenship Macro Economic Policies and Promotion Basic Income & Income Redistribution Public Health Standards Education Standards Housing Policy Courts/Penal System Rail, Post, Telecoms Road Standards National Roads Science/Research</p> | <p>CLEARLY REGIONAL</p> <p>Regional Planning Maritime Planning Transport Planning Water & Soil Conservation Environmental Management Health Care Ports Energy Supply/ Distribution Major Reserves Primary Education Economic Promotion</p> | <p>CLEARLY DISTRICT</p> <p>District Environmental & Land Use Planning Local Roading Sewerage Refuse Collection Street Cleaning Street Lighting Drainage Local Reserves Community Facilities</p> | | |
| <p>CENTRAL OR REGIONAL (pending further analysis/ negotiation)</p> <p>Tertiary Education Vocational Training Secondary Education Police Traffic Enforcement International Airports Consumer Protection Fire Services</p> | <p>REGIONAL OR DISTRICT (pending further analysis/ negotiation)</p> <p>Community/Welfare Programmes Libraries Domestic Airports Bulk Water Supply Housing Public Health</p> | | | |
| <p>SHARED OR UNDERTAKEN BY ALL LEVELS</p> <table><tr><td><p>Coordination with other tiers Civil Defence Information/Statistics Public Administration</p></td><td><p>Arts, Rec & Tourism (including museums & art galleries) Advocacy and Promotion Taxation</p></td></tr></table> | | | <p>Coordination with other tiers Civil Defence Information/Statistics Public Administration</p> | <p>Arts, Rec & Tourism (including museums & art galleries) Advocacy and Promotion Taxation</p> |
| <p>Coordination with other tiers Civil Defence Information/Statistics Public Administration</p> | <p>Arts, Rec & Tourism (including museums & art galleries) Advocacy and Promotion Taxation</p> | | | |

Figure 2. Analysis of the functional responsibilities of the three sectors of Government. (From Peat Marwick (1988)).

Those areas of greatest concern to wetland management, are felt by the authors to be best performed by Regional Government. They include; regional planning, water and soil conservation, major reserves and environmental management.

Statements concerning the shape of the new resource management laws, also point to greater responsibility being placed at a regional level. Four possible options for the new laws were discussed in 'Directions For Change - A Discussion Paper' (Ministry for the Environment 1988).

They are illustrated in the following table.

| | OPTION 1 | OPTION 2 | OPTION 3 | OPTION 4 | PRESENT |
|----------|--------------------------------|------------------------|------------------------------------|------------------------------------|---------------------------------|
| LOCAL | | Landuse | | Landuse and noise regulation | Landuse |
| REGIONAL | Control of all resources | All other resources | All other resources | All other resources | Water all other resources |
| CENTRAL | | | Coastal management, minerals | Coastal management, minerals | minerals |

Table 1. Options for the new resource management laws.

(Adapted from Paper 1, Core Group on Resource Management Law Reform (1988)).

From Table 1 it can be seen that at present, the responsibility for resource management is spread over the three tiers of government; Local, Regional and Central. The four alternatives for the future show that a greater proportion of the responsibility will be carried by Regional Government.

The two reforms, therefore, are consistent in their conclusions concerning the role of Regional Government.

These conclusions provide reason for concern for the management and conservation of all natural resources and habitats, including wetlands.

At present Regional Government is relatively weak; although it is required to formulate regional schemes, these must be approved by Central Government. Therefore, if greater responsibility is transferred to them they must become stronger.

At present wetland management is largely directed from Central Government, and this is the perspective taken in the New Zealand Wetlands Management Policy (1986).

The question arises: does the Regional Government have the resources, expertise, and desire to manage wetlands in the interests of the whole country.

The pressures which will be placed on Regional Government are likely to be great. Their new responsibilities will also mean that the regions will have to pay for the services and functions the Regional Government performs. It seems likely therefore, that one of their major objectives will be to encourage development in their regions.

It has been suggested, that placing greater responsibility for environmental management in the hands of Regional Government, will lead to the relaxation of protective regulations, as regions compete to attract developers and investment (Rowland and Marx 1982).

Riddell (1987), argued that although he believed Regional Government should be given greater functional authority, the regional tier would only be effective if it was answerable to the public and Central Government. This is believed to be necessary because the public could not be assured that Regional Government would manage resources in the wisest manner.

I believe it is important that the 'public' which Regional Government is answerable to, is the greater public, rather than just the local public. There should be some way of making regions with strong local interests, accountable to the wider society.

To conclude, much of what will happen in future wetland management and conservation, will depend on the collective values of individual regions, their wealth and their interests.

Unless the regions have the resources (or can gain the resources from central government), to protect and manage wetlands, and other natural habitats, it is unlikely that many regional or territorial authorities will be able to justify the cost of protection to local voters. With less intervention from central government, and an increased emphasis on the regions to provide for their own needs, the pressure to develop will increase.

These factors suggest that the future of wetlands as viable ecosystems, is by no means certain.

3.6 Summary

Chapter 3 has presented a discussion on the policies which are likely to affect wetland management.

New Zealand's past, and current economic direction was briefly discussed, concentrating on the effects of government intervention in farming and forestry.

The recognition of the principles of the treaty of Waitangi was discussed, and how probable future changes in ownership of wetlands is likely to affect them.

The restructuring of government departments was discussed. Particular attention was paid to the establishment of DOC, and whether it would be capable of protecting and managing our wetland resources. The importance of the Environment Act (1986) was discussed.

Lastly, the two reforms; the Local and Regional Government Reform and the Resource Management Law Reform were discussed in detail. The effects of placing responsibility for the management of resources, in the Regional Government sector was considered.

CHAPTER 4

CHANGES TO THE NEW ZEALAND WETLANDS MANAGEMENT POLICY

4.1 Introduction

The foreword of the New Zealand Wetlands Management Policy (1986), explains that there is a need for a national wetland policy because of the lack of legislation protecting wetlands, and the scattered distribution of the agencies responsible for their management.

The policy, it states, is designed to 'show the way rather than to specify particular actions' (p1).

The legislation protecting wetlands has increased slightly since the writing of the Wetlands Policy, with the passing of the Water and Soil Conservation Amendment Act (1986), the Environment Act (1986), and the Conservation Act (1987).

There are still a large number of government agencies dealing with wetland issues, although this is likely to change with the reform of Local Government, and the new Resource Management laws. The agencies responsible for dealing with wetlands are spread throughout local, regional and central tiers of Government. However, with the changes in the Resource Management laws, and the Local and Regional Government Reform, more responsibility will be concentrated in regional government, with the possibility of some remaining in Local and Central Government.

The New Zealand Wetlands Management Policy 1986 has three broad categories of objectives; preservation and protection, wetland inventory, and public awareness. Under each of these broad objectives there are a number of more specific objectives dealing with particular areas.

I wish to consider each of these specific objectives and discuss whether they are being accomplished, and whether they are

still appropriate in light of the changes in New Zealand's economy and national policies, (as discussed in Chapter 3).

4.2 Preservation and Protection

- 1.1 To act urgently to protect by preservation additional wetlands that fulfil the criteria of the International Union for the Conservation of Nature and Natural Resources (IUCN) for Wetlands of International Importance.

There are a number of wetlands which have been acknowledged as being suitable as wetlands of international importance, such as the Whangamarino Wetland (Ogle and Cheyne 1981). However, as noted in Chapter 2, the recognition given to the IUCN Wetland Convention in New Zealand has been limited. The fact that wetlands listed under this convention have no legal protection under New Zealand law, seems inconsistent.

I believe that this objective should include the seeking of protection, in New Zealand law, for those wetlands listed as Wetlands of International importance.

- 1.2 To protect wetlands of national importance, and where appropriate, wetlands of regional and local importance.

If the management of natural resources is devolved to Regional Government it may prove difficult to protect wetlands of national importance. It may be that Central Government will have to provide the finance for the protection of nationally important wetlands.

The limited resources available to Regional Government may also make it more difficult to protect wetlands of regional and local importance. Regions will be expected to pay the costs of the services supplied by Regional Government, and they are likely to try to encourage regional development and investment.

This could be deleterious to attempts to protect local wetlands.

- 1.3 To gain adequate permanent protection of representative examples of all types of wetlands in private and public ownership. Priority will be given to preservation of the least modified and most ecological viable examples of each type.

At present there is no way to provide permanent protection for any habitat.

The ability to protect representative examples of all the wetland types, is difficult because there are so many different types and combinations of types. However, possibly more important is the argument of whether it is better to protect scattered representative wetlands, or to try to protect areas which are sustainable.

Again there is the question, who will pay for the protection of these wetlands. Protection of wetlands on private land is difficult without substantial resources, as the only way in which some wetlands will be realistically protected, is through outright purchase from the landowner.

- 1.4 To retain or re-establish wetlands significant for the protection or enhancement of aesthetic, scenic, recreational and tourist values.

The only types of wetlands which we can re-establish are lake margins and duck ponds. We do not have the understanding of wetland functions to re-establish other types of wetlands.

- 1.5 To protect and manage habitats important for native flora and fauna, giving priority to rare and endangered species and habitats of importance to migratory bird species.

This objective contradicts 1.3, where priority will be given to the least modified and ecologically viable sites. I believe

that these two objectives would more sound if they redefined their criteria for preservation, and combined to form one stronger objective.

- 1.6 To protect, enhance or re-establish wetlands and their access ways which are important for fish.

There are dangers inherent in trying to enhance wetlands, as this may alter the natural balance of the particular environment.

- 1.7 To promote the concept of managing all wetland catchments so that the complex relationships that exist within a wetland, and between a wetland and surrounding ecosystems are taken into account.

It is this objective which should form the basis of all other objectives in this section. It is the most important, because it recognises the wetland as part of a greater system, which in itself must be wisely managed.

If boundaries of regional government are to be based largely on catchment areas, this objective may have greater value in the future.

- 1.8 To protect and manage wetlands that have an important hydrological role in such a way as to maintain or enhance that role.

To carry out this objective we must have a greater knowledge of wetland functions.

4.3 Wetland Inventory

- 2.1 To maintain an inventory of the most significant wetlands. A wetland inventory is important, but considering the task involved and the rate at which wetlands are being modified, it may be appropriate for the job to be decentralised.
- 2.2 To link the national inventory for wetlands with other related government resource inventories to ensure optimal compatibility of the inventory.

I do not believe this objective is within the scope of this policy. It is probably a more appropriate activity for the Department of Conservations' list of general duties.

4.4 Public Awareness

- 3.1 To promote public awareness of wetland values and encourage public participation in the planning and management of wetlands.

Public participation requires planning and management legislation which allows this to occur. The reforms, aim to provide for greater public participation in the future, but whether it will occur is as yet unknown.

- 3.2 To preserve and enhance the opportunities afforded by wetlands for education, scientific study and recreation.
- 3.3 To promote the tourism and recreational potential of wetlands.

While these objectives are laudable, little progress has been made in recent years.

4.5 Changes to the New Zealand Wetlands Management Policy

In the publication 'Wetlands: A Diminishing Resource' (1983), a comment is made about the wetland policy developed by various government departments:

"How many New Zealand government departments have, or are developing wetland policies, and yet most of them have no teeth." (Appendix 9, p4)

I believe this can also be said of the New Zealand Wetlands Management Policy (1986). The Policy does not provide strong and

clear direction. This is due to the changes in the economy and national policies since the writing of the Policy, as well as the content of the Policy itself.

4.5.1 Changing the Emphasis from Central to Regional

The New Zealand Wetlands Management Policy does not take into account the changes which are at present occurring in the LRGR and RMLR. The major concern is that the Policy must recognise and direct itself to Regional Government rather than Central Government.

It should recognise the problems which Regional Government will face, in trying to finance the protection and management of wetlands, and the conflicts of interest which will occur.

The Policy must also emphasise the need for some form of responsibility by Central Government, in the protection of nationally and internationally significant wetlands.

4.5.2 The effects of Regionalism on the Whangamarino Wetland:

A Case Study

To illustrate the concepts described above, and in Chapter 3, where the effects of increased regionalism in wetland management were discussed; I will present an example; the Whangamarino Wetland Complex.

The Whangamarino Wetland is situated in the Lower Waikato Valley, and comprises approximately 7300 ha, of swamp and bog land.

The wetland has been ranked highly as a wildlife site at both a regional and a national scale. Fifty six species of birds have been recorded there, including, at least one third of the New Zealand total of bitterns, and high numbers of fernbirds, spotless and marsh crakes and the rare banded rail (Ogle and

Cheyne 1981). Up to 3,000 swans and 40,000 mallards and grey ducks use the wetland annually. Numerous species of fish are also present, including; carp, catfish, mosquito fish, kokopu, common bully, mullet, eels and the rare black mudfish.

In 1981 the New Zealand Wildlife Service, concluded that the wetland easily fulfilled the criteria of a Wetland of International Importance (Ogle and Cheyne 1981).

The wetland is also an integral part of the Lower Waikato Flood Protection Scheme.

Although the wildlife and hydrological values alone are easily recognised, there are groups with conflicting interests, who would like to see the wetland developed. Land developers and some local bodies fail to recognise preservation as a legitimate landuse, and have actively promoted schemes to drain further large portions of the swamp (Cheyne 1980).

The two development interests in the region are agriculture and mining. Already at least 2300 ha has been drained or reclaimed by these activities. To complicate the situation further; the majority of the wetland is underlain by coal, which, although too problematic to mine at present, may become an option in the future.

The Waikato Valley Authority in collaboration with the Department of Lands and Survey developed a strategy for management in 1984, but the recommendations and proposals contained in it are not binding in law.

This wetland is important in a regional, national and international context. The actions of a Regional Government with strong development interests and little concern for wetland conservation, could spell disaster for this wetland.

Now that the Department of Lands and Survey has been restructured, the question of ownership becomes important again.

Much of the margins and the surrounding land is in private ownership, but the majority of the actual wetland is Crown land. If the land is returned or sold to the private sector, the future of this wetland may be in doubt.

It is unlikely that conservation interests could afford to buy the land. The Auckland Acclimatisation Society managed to purchase about 250 hectares in 1976, at a cost of more than \$60,000 (Cheyne 1980). Regional Government is also unlikely to be able to afford such a large area of land, even if they wished to develop it, rather than protect it.

It is in situations as these that control of the management of wetlands must arguably rest with the whole of New Zealand and Central Government (Cheyne 1980; Ogle and Cheyne 1981; Environmental Council 1983; Stephenson 1986).

4.5.3 Streamlining the Policy

The Policy tells the decision-maker or the manager the types of issues which are important in the management of wetlands, but does not in reality, provide many practical routes to addressing them. The Policy objectives need to be organised and worded so that they can be simply followed.

The Policy should be integrated with all the laws which affect wetland management. This will include the new resource management laws, as well as the Environment Act (1986), and the Conservation Act (1987). The aim of doing this is to give greater strength and credibility to the Policy.

4.5.4 The Inclusion of Maori Values in the Policy

Maori values, should also be integrated in the Policy. The policy should not only be recognise the principles of the Treaty,

but should also give positive reinforcement of the values which the Maori place on water and wetlands.

4.5.5 Other Inclusions to the Policy

The 1986 policy does not encourage innovative forms of conservation or non-exploitive use of wetlands. As resources for conservation are limited, the climate is favorable for innovative conservation projects.

Greater emphasis should be placed on the protection of wetlands on private land. Although this situation is noted as part of one objective (1.3), it is under emphasised.

The protection of wetlands for fisheries and aquaculture is not included in the 1986 Policy. It is important that the Wetlands Policy is seen to be concerned not only with preservation, but also with other non destructive, sustainable wetland activities. Fisheries and aquaculture, if properly managed, are two activities which will not damage wetlands, and can improve the public's perceptions of these ecosystems.

Research, both long-term and short-term, is very important to the future of wetlands. In order to provide sufficient management and protection, a reasonable understanding of the functions of wetlands is required.

Not all the research required is purely theoretical; there are areas of research, such as, the use of wetlands for pollution control, which could be of great advantage to humankind and yet help preserve wetland ecosystems.

For at least the last 6 years, the wetland inventory has been in the process of completion. This is an important job which must be finished and then kept up to date. As regions are likely to assume greater control of resource management in the future, a possible solution would be to pass control of formulating the

inventory to them. Resources to do this job would have to be provided, but it might be a more efficient method of actually completing the job, and keeping the information in it, up to date.

As much of the control of resource management is likely to devolve to the regions, a consultative committee should be set up to deal with the implementation of the Wetland Policy. This committee should include individuals from all areas with an interest in wetlands, not only economists and scientists. Their job should include, acting as a watch dog for the wider public, but also advising, encouraging conservation and non destructive uses of wetlands. It would also be their responsibility to make sure the wetland inventory was complete, accurate, up to date, and available to the public.

The Wetland Policy needs to be reviewed now but it is likely that it will require on-going review in the future. Policies, much the same as laws and structures of government, should not be thought of as permanent. As part of the Wetland Policy this factor should be recognised, and regular reviews of the Policy prescribed.

4.6 Summary

Chapter 4 considers closely the New Zealand Wetlands Management Policy (1986), and how it functions. Each objective in the Policy is discussed and comments are made about their validity and their likelihood of success. Section 4.5 contains a discussion of the issues which I believe should be included in the New Zealand Wetland Policy.

The New Zealand Wetlands Management Policy was formulated to 'show the way' rather than to specify particular actions. However, in my view the Policy does not present the 'way' clearly enough.

The Policy is out dated because of the changes in Government policies, which have occurred since 1984, with the election of the Labour Government. In particular the changes to the resource management laws and the reform of Local and Regional Government are likely to have a great effect on the future of wetlands, with greater emphasis being placed on Regional Government. These factors must be integrated into the Wetland Policy before it can be of use in the future.

CHAPTER 5

CONCLUSIONS

Wetlands are complex, diverse and fragile ecosystems. They are among the most productive and the most threatened ecosystems.

Their traditional image has been negative, particularly in the western developed world. In recent years, wetlands' positive values have slowly begun to be realised, and the threats to their continued existence recognised.

In New Zealand, the major threat to wetland survival has been agriculture, but other forms of destruction include, forestry, reclamation for both urban and rural development, pollution, and the alteration of catchment conditions.

The positive values which have been recognised, include, ecological, hydrological, recreational, cultural, landscape, scientific and educational values.

The need to protect and conserve remaining wetlands, has been recognised internationally. Wetlands are the first ecosystems which have had an international convention dedicated to their preservation. In 1975, the 'Convention on Wetlands of International Importance' was adopted by 45 countries, including New Zealand.

In 1986 New Zealand formulated the New Zealand Wetlands Management Policy. Its aim was to provide a co-ordinated policy on wetland management in New Zealand. This was felt necessary because of the lack of legislation protecting wetlands, and the number of different government agencies with an interest in wetlands.

In 1984, a new Government was elected, and with their arrival came a great number of changes in policy. At the same time there was increased recognition of the Treaty of Waitangi, and the

creation of an Environment Act and Ministry for the Environment. New Government policies included, the restructuring the Government sector (both central and local), deregulation, non-interventionism and the devolution of power. The review of the Resource Management Laws and the Local and Regional Government Reform are two major changes, which are underway at the present time.

The 1986 New Zealand Wetlands Management Policy did not take these changes into account. Partly, because the policy was written at a time when the new changes were still emerging, but largely, because the Policy was written with a late-1970s environmental and political perspective. Most of the objectives were obtained from an earlier publication; 'Wetlands: A Diminishing Resource (A Report For The Environmental Council)' (Environmental Council's Wetland Task Group, 1983), and watered down to be less specific.

Closer examination of the objectives reveals that they are generally still valid. However, the fact that the Policy does not reflect the present economic and political system is, I believe the reason for the apparent lack of success of the Policy.

The New Zealand Wetlands Management Policy must be reviewed, if it is to be useful in the 1990s. Changes which should be considered, include:

- a) Formulating the Policy taking into account that regions will have greater powers in resource management issues.
- b) Integrating existing laws into the Policy, such as the of the Environment Act (1986).

- c) Creating an policy which allows and encourages co-operation between different groups, individual, and agencies which are concerned with wetland management.
- d) Placing greater emphasis on Maori values.
- e) Encouraging of innovative conservation projects.
- f) Encouraging non-destructive uses of wetland ecosystems.
- g) Protection of wetlands of importance to fisheries and aquaculture.
- h) Encouraging long and short-term studies of wetlands. Both of a theoretical and applied nature.
- i) Setting up a consultative committee on wetlands; to advise, act as guard on the regions, encourage conservation and the non-destructive use of wetlands.
- j) Incorporation of a clause which calls for the review of the Policy at regular intervals.

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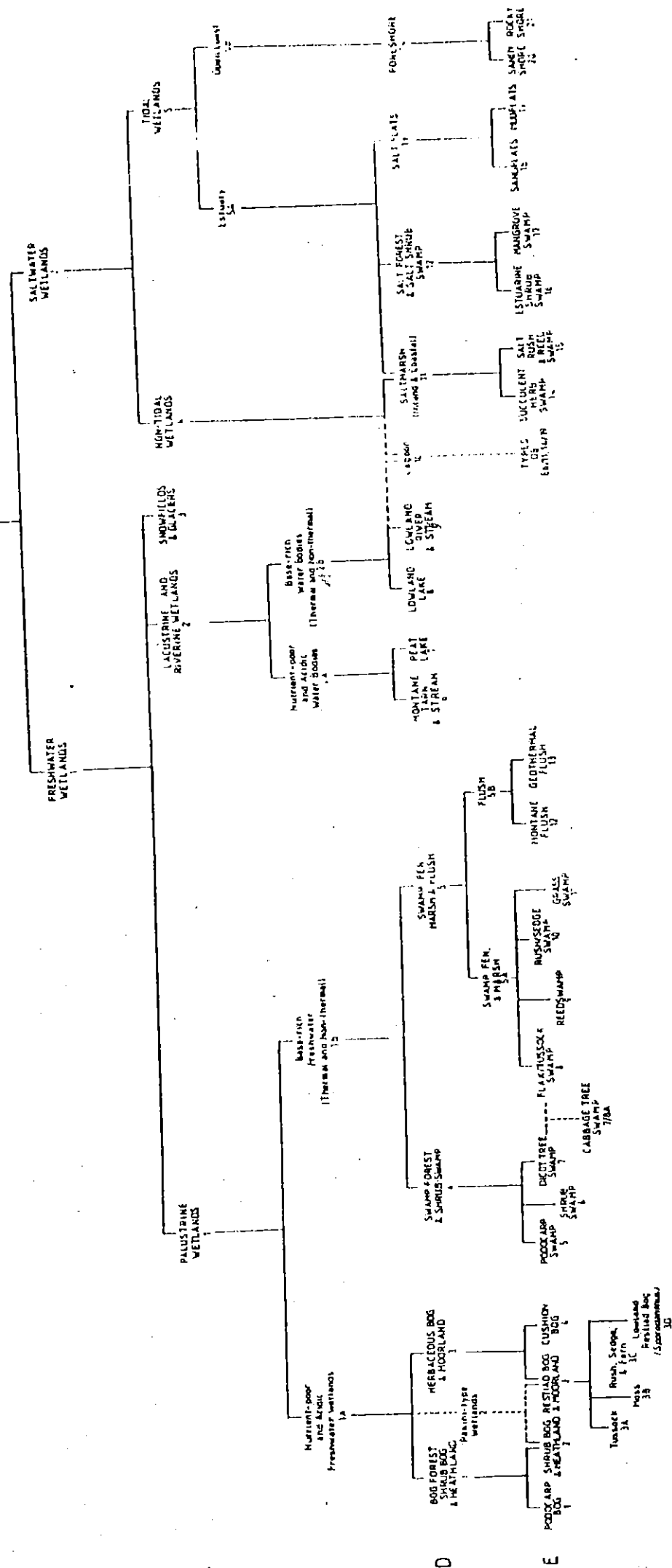
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NEW ZEALAND WETLANDS



The wetlands of New Zealand have always been an important part of the New Zealand environment. It was around the coastal estuaries and lagoons that the earliest Maori settled and harvested the shellfish, fish and eels that abounded. It was from the flax swamps that material for weaving was collected and waterfowl snared. To the early Pakeha the swamp brought an export product – flax fibre stronger than any fibre yet in use in the world – to help establish the settlement on a firm economic footing. And it was the enormous flat swamplands that yielded fertile soil when drained, sustaining farmers and supporting sheep and dairy cows. Drainage became a major cultural activity, like the bush clearance a symbol of the "great work" of turning New Zealand into an economically productive land.

Today, however, times have changed. With few of our lowland wetlands intact the many other uses are being recognised – habitats for rare plants and wildlife, landscapes in sharp contrast to the more uniform image of farmland, water storage systems and filtration plants for managing floods and water quality, recreational pursuits like hunting waterfowl and fishing.

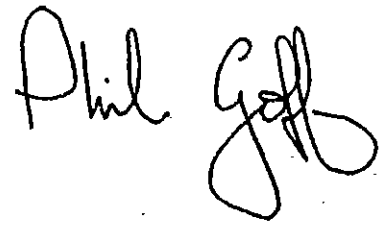
But it is hard to reverse a trend. There is little legislation for protecting wetlands, and a lot of policy, equipment and expertise ready to facilitate destruction. The agencies of government responsible for wetlands are scattered so that a coordinated policy for protection is difficult to achieve. Information about wetlands is scattered and usually incomplete so that priorities for protection are difficult to recognise.

It is the extent of wetland depletion, the many positive values they have as intact ecosystems, the fragmented administration and conflicting policies, that have led the Government to ratify this New Zealand Wetlands Policy. It is a policy designed to show the way, rather than to specify particular actions. It foreshadows the establishment of the Department of Conservation which will clearly become the major advocate for wetland protection. Armed with this policy and WERI (the national wetlands inventory which will serve as the data base for the implementation of the policy), the new environmental administration will be in a position to foster the sensitive management of remaining wetlands: as beautiful, complex, productive ecosystems, rich in unique plants and animals, rich in historical memory of how our culture

developed. Just as the indigenous forest policy has served to enlighten and lead forest protection on crown lands, so will this Wetlands Policy help us find an ecological perspective for one of our most characteristic natural features.



Minister of Conservation



Minister for the Environment

Wetlands Policy

In approving the policy, the Cabinet Policy Committee noted "that the policy is intended to indicate that in broad terms the Government regards the protection of representative important wetlands as being desirable, rather than to bind the Government to any course of action or to justify restrictions on the actions of the private sector".

The Policy

In the context of this policy, wetlands is:

A collective term for permanently or intermittently wet land, shallow water and land-water margins. Wetlands may be fresh, brackish or saline, and are characterised in their natural state by plants or animals that are adapted to living in wet conditions.

One hundred and fifty years ago the wetlands of New Zealand were widespread. They supported very large populations of birds, a prolific range of plants, and were an integral part of the life cycle of many species of fresh and salt water fish. Like the indigenous forests and tussock grasslands, many wetlands were subsequently developed for productive economic uses.

The various wetland types in their wide range of location (mountain top to estuary, snowfield to mud pool, swamp to braided river) are valuable for many reasons. **Hydrologically**, they may assist in reducing floods, in maintaining minimum water flows and in recharging underground aquifers. **Biologically**, they are habitats for a wide array of fauna and flora, including some that are in danger of extinction. **Economically**, they are essential for some inland and offshore fisheries. **Recreationally**, they are enjoyed by many thousands of fishermen, shooters, naturalists and those engaged in other water sports. **Educationally**, they form excellent examples of the functioning of ecosystems and the study of biology. **Scientifically**, they offer a storehouse of information on climate, vegetation, vulcanology, archaeology and other events enabling a better ability to manage future events. **Culturally**, they are of great historic and current importance in Maoritanga. **Scenically**, the New Zealand landscape would be sadly depleted without them.

Because past and current development and modification of wetlands has greatly reduced their former extent, emphasis in wetland management has to be given to preservation, with development only when there is an overwhelming balance in its favour.

The need to preserve representative natural ecosystems already has public support and has been embodied in legislation.

Society's recognition of the need to preserve representative natural systems is embodied in international conventions and within legislation. New Zealand, as a signatory to the International Convention on Wetlands, shares the international concern for loss of wetlands as a habitat.

"Being convinced that wetlands constitute a resource of great economic, cultural, scientific and recreational value, the loss of which would be irreparable. . . " (Convention on Wetlands of International Importance. IUCN Bulletin April/June 1971.)

It is now accepted internationally as well as in New Zealand that there are values in wetlands that have been too often neglected in the past and lost through lack of appreciation and knowledge.

New Zealand as a society has expressed in legislation its desire to preserve representative samples of natural ecosystems (Reserves Act 1977).

Wetlands are a diverse group. Generally diminished, some kinds of wetlands are very scarce indeed. Immediate and continuing action is therefore necessary in order to protect them.

Wetlands are depleted. It is not only the overall quantity that has been reduced, there are many distinctly different types of wetland, all with their special values, and some are now scarce. Policies and management must recognise these differences both of scarcity and kind.

Wetlands continue to be modified. The Government is concerned that many of the rarest wetland types may be developed and lost.

Wetland management must consider causes and consequences beyond the wetland boundary.

Wetlands can be seen as distinct natural systems but are affected by and have effects on other systems. Management must go beyond the 'wet' land to encompass the greater system of which the wetland is a part. Such management may not necessarily mean reservation of the whole catchment, but particular care of sensitive areas.

The long term benefits lost by modifying wetlands frequently do not justify the short term benefits gained. The government must act as advocate for wetland preservation because of the less tangible benefits from unmodified wetlands which accrue to the general public. Government also has an important role in wetland management promoting research and fostering awareness of wetland values.

It may not be easy to identify and characterise some of the benefits that flow from wetlands. Such direct and indirect benefits tend not to be valued in monetary terms and may accrue to large numbers of people over a long time period.

For example, unmeasured hydrological benefits include protecting downstream water quality, preventing excess flooding, maintaining water flows in summer and recharging aquifers and maintaining water tables. By comparison, the benefits obtained from modifying a wetland tend to be more tangible (for example, revenue from grazing stock). As these usually flow to one definable group, modification often has a strong advocate.

As trustee of the public interest the Government has the responsibility to retain wetlands because of their "*economic, cultural, scientific and recreational value*" (IUCN).

The Government acknowledges its further role in the management, promotion, enhancement and creation of wetlands.

Wetland modification may cause irreversible changes. Such changes reduce choices available to future generations. This risk is heightened by the lack of knowledge about wetlands themselves as well as wetland catchment interactions.

Once a wetland has been significantly modified it can rarely if ever be returned to its original state. Some of the values lost may be irreplaceable. A wetland may contribute benefits that are not appreciated until they have gone. Possible future benefits may not be recognised at the time of development.

The Government acknowledges a responsibility to future generations. If more of our unique wetlands are irreplaceably lost, the quality of life available for future generations will be diminished.

Accordingly, this statement sets out Government policy as a guide to all agencies and individuals who manage and make decisions in relation to the use of wetlands throughout New Zealand. The provisions of this policy are to be reflected in local, regional and national policies and legislation that relate to wetlands and their management.

Objectives

1. Preservation and Protection

- 1.1 To act urgently to protect by reservation additional wetlands that fulfil the criteria of the International Union for the Conservation of Nature and Natural Resources (IUCN) for Wetlands of International Importance.

- 1.2 To protect wetlands of national importance, and where appropriate, wetlands of regional and local importance.
- 1.3 To gain adequate permanent protection of representative examples of all types of wetland in private and public ownership. Priority will be given to preservation of the least modified and most ecologically viable examples of each kind.
- 1.4 To retain or re-establish wetlands significant for the protection or enhancement of aesthetic, scenic, recreational and tourism values.
- 1.5 To protect and manage habitats important for native flora and fauna giving priority to rare and endangered species and habitats of importance to migratory bird species.
- 1.6 To protect, enhance, or re-establish wetlands and their access ways which are important for fish.
- 1.7 To promote the concept of managing all wetland catchments so that the complex relationships that exist within a wetland, and between a wetland and surrounding ecosystems are taken into account.
- 1.8 To protect and manage wetlands that have an important hydrological role in such a way as to maintain or enhance that role.

2. Wetlands Inventory

- 2.1 To maintain an inventory of the most significant wetlands.
- 2.2 To link the national inventory for wetlands with other related government resource inventories to ensure optimal compatibility of the inventory.

3. Public Awareness

- 3.1 To promote public awareness of wetland values and encourage public participation in the planning and management of wetlands.
- 3.2 To preserve and enhance the opportunities afforded by wetlands for education, scientific study and recreation.
- 3.3 To promote the tourism and recreational potential of wetlands.

SUGGESTED DRAFT POLICY STATEMENT"THE USE OF WETLANDS IN NEW ZEALAND"

Government recognises the depleted but valuable nature of New Zealand's wetland resources. This statement sets out Government policy with respect to the conservation, development and management of these resources.

The statement should be used as a guide by all agencies and individuals who are required to manage and make decisions in relation to the use of wetlands throughout New Zealand, and be reflected in all relevant policies and legislation.

DEFINITIONS

- | | |
|---------------------|---|
| <u>Wetlands</u> | - "Wetlands" is a collective term for permanently or temporarily wet areas, shallow water, and land-water margins. Wetlands may be fresh, brackish, or saline and are characterised by plants and animals that are adapted to wet conditions. |
| <u>Policy</u> | - A broad statement of purpose which reflects the values of society. |
| <u>Goals</u> | - Long range statements of policy expressed in measurable criteria. |
| <u>Objectives</u> | - Specific activities capable of both attainment and measurement which are instrumental for fulfilling goals. |
| <u>Conservation</u> | - The rational sustainable use of natural resources. |
| <u>Resources</u> | - Elements of the environment useful to man in the broadest sense, including physical, biological, scientific, hydrological, recreational, scenic, social, cultural. |
| <u>Use</u> | - Includes exploiting, farming, scientific, recreational, scenic, social, cultural, and non-use. |

POLICY

Recognising the wide range of types of wetlands and the resources they contain, with the high degree of endemism in their biota, the conservation of wetlands is a matter of high priority and must have regard to:

- preservation of wetlands of international and national importance.
- preservation of a representative sample of all types of wetland containing examples of all their indigenous biota and important ecosystems found in these habitats.
- preservation of wetlands as habitats for indigenous and migratory waterfowl and exotic game birds.
- preservation of wetlands as production areas for marine and freshwater fisheries.
- preservation of natural landscapes contained in wetlands.
- retention whenever possible of the naturalness of wetlands.
- recognition and preservation of hydrological values of wetlands.
- preservation of the opportunities afforded by wetlands for education, scientific study and recreation.
- creation and enhancement of man-made wetlands when possible.

GOALS

- to retain wetlands of international and national importance.
- to retain as many representative wetlands in their natural state as possible.
- to minimise the further loss of valuable wetland habitats.
- to enhance the values of man-made wetlands.
- to encourage greater awareness of the resources contained in New Zealand's wetlands.

OBJECTIVES

- to obtain and maintain a National inventory of all significant wetlands by type.
- to evaluate all remaining wetlands by identifying the resources which they contain.
- to encourage protection of wetlands which have resources which should not be lost through development.
- to preserve habitats for wetland flora and fauna.
- to preserve those wetlands which are part of the migratory bird flyway system.
- to preserve adequate wetlands to retain genetic variability in the indigenous flora and fauna.
- to encourage greater awareness of the resources contained in New Zealand's wetlands.
- to prevent loss of or damage to wetlands through inadvertent modification.
- to require a management plan for all wetlands administered by the Crown or local bodies.
- to actively attempt to preserve privately owned wetlands by zoning through the district schemes, purchase by the Crown, or the negotiation of covenants.
- to permit development of those wetlands, which do not have specific natural resources and values that warrant preservation.
- to bring those wetlands which are of international importance under the Wetlands Convention (IUCN).



ANALYSIS

- Title
1. Short Title and commencement
2. Interpretation
3. Act to bind the Crown

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1986, No. 127

An Act to—

- (a) Provide for the establishment of the office of Parliamentary Commissioner for the Environment;
(b) Provide for the establishment of the Ministry for the Environment;
(c) Ensure that, in the management of natural and physical resources, full and balanced account is taken of—
(i) The intrinsic values of ecosystems; and

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(ii) All values which are placed by individuals and groups on the quality of the environment; and

(iii) The principles of the Treaty of Waitangi; and

(iv) The sustainability of natural and physical resources; and

(v) The needs of future generations

[18 December 1986]

BE IT ENACTED by the General Assembly of New Zealand in Parliament assembled, and by the authority of the same, as follows:

1. Short Title and commencement—(1) This Act may be cited as the Environment Act 1986.

(2) This Act shall come into force on the 1st day of January 1987.

2. Interpretation—In this Act, unless the context otherwise requires,—

“Commissioner” means the Parliamentary Commissioner for the Environment appointed under this Act:

“Consent” means an authorisation, permission, a licence, a permit, a right, and any other approval of any type whatsoever, capable of being granted under—

(a) Any Act specified in the Schedule to this Act:

(b) Any regulation, rule, Order in Council, Proclamation, notice, or bylaw in force under any of those Acts:

(c) Any regional planning scheme, district scheme, or maritime planning scheme in force under the Town and Country Planning Act 1977—

and which it is necessary to obtain before the lawful commencement of any undertaking or activity which may affect the environment:

“Contaminant” means any substance, whether gaseous, liquid, or solid that—

(a) Is foreign to or alters the balance of the natural constituents of the environment into which it is introduced; and

(b) Is or may be injurious to, or will or may adversely affect, the environment or the health or safety of persons or property: